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FLICKE: Supplement to the Report on the Decipherment of the Telegrams of Colonel Fellers.

1. The attached is an Army Security Agency translation of a paper written by Wilhelm Flicke, former chief evaluator and the officially designated historian of the Signal Intelligence Agency of the Supreme Command, German Armed Forces.

2. The present paper, German title "Nachtrag zum Bericht über die Entzifferung der Telegramme Oberst Fellers," is an attempt to sum up the case of the Fellers Messages.

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Supplement to the Report on the Decipherment of the Telegrams of Colonel Fellers.

War in the desert has other dimensions than war on the European continent. For its success different factors are decisive. The element of surprise must be rated higher. Operations can suddenly be initiated over an area extending many hundreds of kilometers. Support points of the enemy can be by-passed, surrounded, and wiped out in a short time if supply is impossible. There are few natural lines of fortification and defense. The tank is the decisive weapon. Information regarding the strength and distribution of enemy troops, in particular armored troops, is an absolute necessity and forms the basis of the commander's operational plans. Reconnaissance from the air and by armored scout troops yields a picture which may have changed completely with the passing of a single night. Statements by prisoners give only small fragments of the situation existing at the moment. Nothing is more obvious than the fact that the commander will pay special attention to the results of radio intelligence.

Armored forces cannot dispense with the radio as a means of communication; they may impose upon themselves extensive limitations when it is necessary to veil movements which might give the enemy clues. The British Army radio traffic has striven from the very beginning to maintain excellent radio discipline. The transmission of messages over great distances, in the particular case of the African campaign the connection between the mother country and Egypt, was handled preferably by cable. The English had excellent cable connections which ran from England through the Mediterranean via Gibraltar and Malta to Egypt. At no point was any serious danger to this line of communication to be feared. The messages entrusted to radio were generally insignificant when they were sent in plain text.

In the field of cryptography, however, England had done an outstanding job even in the First World War. Also in the Second

World War it kept pace with the development of this science and in the main could prove the security of its cryptographic systems.

No doubt the German Command in Africa obtained from army and air forces radio traffic messages which were of decisive importance for its operations. Through frivolity on the German part a considerable portion of the success was thrown away. In a surprise thrust by British armored units almost all the worksheets of a German intercept unit fell into the hands of the English. In this way they not only got insight into what the Germans knew but naturally called for an immediate change in all English cryptographic material.

But while the Englishmen whose primary task was to conduct the struggle against the German-Italian Afrika Korps did everything conceivable to guarantee the security of their means of communication and consequently to afford the enemy no advantages, they could hardly suspect that the German High Command was receiving information in another way which almost proved fateful for the outcome of the African campaign.

Early in 1942 American troops were not yet engaged actively against the Axis powers. By their lend-lease deliveries, however, the Americans had long been supporting the Allies and were on their side in spirit. In military matters the U.S.A. and Great Britain had been in the closest contact since the beginning of the war. The Americans shipped to Africa not only tanks and other war materiel but they also sent military observers and advisers to the main theaters of war. The American Military Attache in Cairo, Colonel Fellers, had access at all times to the British High Command in Egypt and received there all the information he wanted regarding the course of the war. He made suggestions and transmitted to Washington the experiences and desires of the English. In so doing, he used exclusively radio and a cryptographic system which was not able to stand up against German scientific cryptanalysis.

Consequently, all the caution and care which was observed by the British in their transmission of information was practically vain and of no account.

It was months before this source of intelligence dried up, due to indiscretion. After the Intelligence Code had been replaced in Cairo, the telegrams of Fellers could no longer be read. On other circuits this cryptographic system remained in use for some time.

However, other systems in Cairo could be read down to the end of the war. Of course they never equaled in importance the messages which had been transmitted in the Intelligence Code.

Fellers sent daily several detailed radiograms from Cairo to Washington. They could be recognized outwardly by the date group in English plain text (the day of the month was expressed as an ordinal); also by the address "MILID WASH" or "AGWAR WASH." The meaning was presumably "Military Intelligence Department and Adjutant General War Department." Listed in the message heading were the enciphered names of the specialists in the American General Staff who were to receive the messages, likewise the names of the specialists on the staff of the Military Attache who sent the messages.

These reports, which were generally forwarded by radio from Cairo to Washington a few hours after the conclusion of staff conferences at British headquarters, were composed with the utmost conscientiousness and punctuality.

For months the German cryptanalytic service was able to decipher these reports and to forward them in complete translation to the military command within a few hours. It was not a rare occurrence that faultily enciphered messages were interpreted by German cryptanalysts and were in the hands of German headquarters before the corrected version arrived in Washington. It was an especially happy accident that at the time when Rommel was planning his campaign to Egypt and started to execute it on 26 May 1942,

the Germans had been able for months to solve all incoming messages without loss of time. Students of military history will have to find out to what extent the failure of this unique intelligence material from 29 June 1942 on had an unfavorable influence on the further course of the campaign.

The content of the radiograms exchanged between Cairo and Washington dealt primarily with the events occurring in North Africa. Along with military matters, political questions were sometimes treated too. For technical reasons military cryptographic systems were sometimes used for transmitting diplomatic reports and vice versa. Going beyond the narrower limits of the Libyan-Egyptian theater of war messages also occurred regarding the preparation and development of new economic and military positions in central Africa and in the Near and Middle East. In particular, these gave a comprehensive picture of the activity of American military missions in these areas and of the deliveries of war materiel, raw stuffs, and material for the construction of highways, airfields, and harbors.

All ships passing the Suez Canal and Port Said were reported once a week to Washington with a statement of the name, cargo, and destination of the ships. Also the movements of British and French warships in the Mediterranean were reported, as well as the causes and details of the mutiny of French sailors on French warships in the harbor of Alexandria during the advance of the Afrika Korps in Egypt.

The following event throws a significant sidelight on the type of reporting from Cairo to Washington. This was often likely to do more harm than good to the British Allies. At the same time this event will serve as an illustration of how the results of radio intelligence can render valuable aid to one's own forces.

In North Africa the English had set up the so-called paratroop-commandos, the "Long Range Desert Group," which served to take by surprise or to destroy airfields, bridges, dumps, and depots,

which were often hundreds of kilometers behind the front. Such a paratroop commando was once employed against Rommel's headquarters (according to Fellers' report). Rommel escaped by a hair's breadth. One day Cairo announced that such an action was to be carried out one evening at a specified hour against the airfields of the Axis powers. The parachutists had the assignment of destroying grounded machines and damaging the airfields by the use of the explosives they carried along. The radiogram could be deciphered at once and passed on to Rommel's headquarters. The crews of the airfields were alerted on the evening mentioned, and when the sabotage troops landed they were rendered innocuous. Only at one airfield did they have success; here the commander had paid no attention to the warning. The whole action proved a failure for the English because someone had frivolously blabbed over the radio, but it was a success for the Germans because the intercept service had been able to receive and decipher the message.

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The first messages in the Intelligence Code and the Confidential Code were read somewhere around December 1941, that is, at the time when Rommel was being forced after the battle of Sidi Rezegh to regroup his forces and withdraw with heavy losses via Derna, Benghasi, and Agedabia. In general, messages in these important systems are available currently.

Messages solved after some weeks or months are no longer up to date but they are nevertheless valuable. They give considerable information about the organization and location of British forces. Fellers reports on the commitment of tanks, airplanes, and artillery. He tells what types of tanks have proven worth while, gives technical details, praises or censures the German defense. He gives a picture of the fighting power of the German troops, of their strength and armament. These reports are not

always his own personal views; he gets them from good authority at British headquarters; occasionally he adds his own criticism of the views of the British generals. These reports are so important because they reflect what is known regarding the German-Italian troops and the British estimate of them, giving an unadorned picture which is not influenced by propagandistic considerations. These reports differ materially from press and radio reports because they offer a sober picture of military and political events and they are not intended to influence public opinion at home or abroad. They differ from agents' reports in that they represent the true opinion of important specialists.

When Rommel pushes forward with his armored columns from the El Agheila area in January 1942, he is in possession of dependable data regarding the approximate strength and equipment of the enemy, likewise regarding the latter's offensive and defensive tactics, regarding which the American Military Attache has indulged in critical remarks. The leaders of the British Eighth Army are aware that in Rommel they have to deal with a capable and bold general. In the rigid grouping of German and Italian divisions under Rommel's command they see a strengthening of the combat power and regard the increased number of troops and tanks of the German contingent as a sign of readiness for a new attack. The fighting spirit of the German troops is considered superior to that of the Italian units. Captured German tanks and anti-tank guns are described and evaluated. Fellers criticizes the low estimate often put upon German weapons by British generals and engineers. Planes shot down over the enemy's line and the sinking of troop transports and supply ships passing the Sicilian Strait are reported. The American Military Attache emphasizes the difficulties arising for the British Commander-in-Chief through the fact that troops of numerous nations, including French, Poles, Australians, South Africans, and Indians are united under his command.

During the period from the middle of February to the middle of May 1942 no important military actions are reported, merely air attacks, reconnaissance undertakings, and artillery duels. Supplies and troop reenforcements are brought up on the British side. Fellers reports that there is uncertainty in the estimate of the German offensive strength. There are no precise clues regarding the strength of the German Afrika Korps but a considerable reenforcement in the way of tanks and the introduction of new types are assumed. They count with certainty on a German offensive in the spring; the tactics Rommel would use in tank warfare seem uncertain. An attack on a wide front appears unlikely; all the more likely seems the use of the factor of surprise, attack on single targets, and diversionary maneuvers by sham attack. After breaking through with massed forces at one point in the extensive system of defense and conquering a support point, a bold flanking maneuver by swiftly moving units is expected.

Decipherment of the new sets of substitution tables of the Intelligence Code is not always able to keep step during these months. The very detailed statements, however, regarding troop locations, strength and equipment, regarding the strategy of tank warfare in the desert, still retain their value if they are deciphered two or three weeks later. Every intention to transfer troops or make changes in the composition of divisions or in their equipment is reported with the utmost care. The shifts of German troops beginning in May are recognized by air reconnaissance. General Ritchie inspects mine fields and lines of defense. In the cryptanalytic section in Berlin they work at a feverish pace; once again the set of substitution tables has been replaced, and it is a question of overcoming a slight lead, which is to be accomplished by refined methods of work.

Moreover, they succeed in sending on its way by X-day, 26 May, the first deciphered intercept bearing the dispatch date of that

same day from Cairo. There are still some messy places and gaps in the message text but these can be eliminated during the two following days and from then on, thanks to the splendidly functioning intercept stations, the cryptanalytic experts are able to reconstruct in a very short time complete messages out of the tangle of letters. Fellers is so talkative and loquacious that the daily production is almost equal to a small book. For over a month he unsuspectingly entrusts to the aether these most precious messages of all and unconsciously achieves, by so doing, the very thing that his British ally had avoided doing by using first-class modern cryptographic means; he gives away the military secret. It is all the more astounding to the German cryptanalysts that even in the weeks of a decisive offensive there is not at least a replacement of the then valid substitution tables.

During the last days of May 1942, Washington receives current reports on the battle, on the breakthrough at Bir Hacheim, which is defended by the Free French and later has to be abandoned. The commitment of new American tanks of the Grant type and of English 7.5 centimeter grenades with automatic fuse against hostile tanks is reported. The annihilating effect of German 8.8 centimeter anti-tank guns is described. The airfields from which the speedy British fighters of the Hurricane and Kitty Hawk type take off are mentioned by name and their locations described; likewise, the mine fields which are intended to check an enemy attack. South Africans and Indians are thrown into the struggle. Rommel thrusts forward in several columns.

In mid-June General Ritchie has to withdraw from the Gazala line and on 18 June Tobruk is reached and cut off. The units shut up in the city and their supplies of ammunition and provisions are ascertained by Fellers and are likewise reported promptly to Washington. Three days later the city is taken in a surprise attack. Twenty-five thousand men and untold material fall into the hands of the Axis troops.

Meanwhile, the Egyptian frontier has been reached and Cairo radios that Ritchie must abandon his headquarters in Gambut and move to Sidi Barani in Egypt. The Eighth Army has retreated via Bardia and Sollum to Halfaya Pass in order to save its main body. Its regrouping and the occupation of new defense positions are reported. The German 90th Light Infantry Division is mentioned with special praise. Rommel's army is regarded as twice as strong as the British Eighth Army which consists of four divisions, one English, one Indian, one South African, and one mixed. A New Zealand division under General Freyberg is rushed to Mersa Matruch and becomes involved in a battle with the 90th Light Infantry Division and German tanks.

On the day following Ritchie is relieved of his position as Commander of the Eighth Army and Auchinleck takes over the command himself. The Axis troops reach Mersa Matruch. A decided disquietude and nervousness takes possession of the British command; Alexandria, the Suez Canal, all Egypt, and with that the entire Mediterranean and the road to the Middle East are endangered. Fellers is already reporting defensive measures for Alexandria and the Suez Canal Zone.

However, in this period also falls the fateful day for the Intelligence Code, 29 June. From this day on it is no longer used in Cairo-Washington traffic. Fellers' reports, endlessly long and doubtlessly just as important as before, are enciphered with the cipher machine. This system calls for wearisome technical studies and could not as yet be read when the last German troops were evacuated from Tunis to Sicily.

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What occasioned the replacement? It is only possible to surmise and two surmises are well founded and, therefore, quite probable.

During the war there was stationed at the Vatican a diplomatic

representative of the U.S.A. who stood in radio communications with Washington like any other ambassador or minister. In a radiogram sent to Washington in June 1942, enciphered by means of a diplomatic code book, one could read of a conversation which a representative of the Vatican had had with an Italian of high position. During this conversation the Italian had mentioned that the Germans could read the most important cryptographic system of the American Military Attache. The American representative had learned this at the Vatican through a Vatican official and was therefore warning the American War Department against any further use of this cryptographic system.

Two days before the replacement of the Intelligence Code the German broadcasting station transmitted a radio play regarding British and American intelligence services in which the American Military Attache in Cairo appeared as the transmitter of extensive information to Washington regarding the campaign in North Africa.

Perhaps it is idle to search for a reason for the replacement of a code, even though the timing seems rather remarkable. Experience teaches that every code must be replaced at some time when it has been used too much and is therefore worn out and ceases to be a secret writing in the eyes of the specialist.